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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,603	02/19/2002	Takemi Hasegawa	50395-134	2299

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EXAMINER	
HOFFMANN, JOHN M	

ART UNIT	PAPER NUMBER
1731	

DATE MAILED: 12/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/076,603	HASEGAWA ET AL.	
	Examiner	Art Unit	
	John Hoffmann	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 November 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) *16* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 5-14* is/are rejected.

7)☒ Claim(s) *4* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 18 November 2004 has been entered.

Election/Restrictions

Newly submitted claim 16 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claim 16 calls for making a preform which has holes in it, claim 15 (and claim 1) as originally presented required the creation of holes in a preform. These are mutually exclusive species. The Office never conducted a search for the species of making preform that has the holes already in it. It would be an unreasonable burden on the Office to now search the new, mutually exclusive specie.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 16 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Objections

Claim 4 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 3 requires that the second step is performed "while the holes...are filled with a dry gas. Claim 4, on the other hand, requires the holes be filled and discharged repeatedly: they are only filled part of the time. These two things are mutually exclusive. For claim 4 limitation to be effective, the second step would coincide with periods when the holes are not filled – thus taking it outside the scope of claim 3.

Claim 4 is not further treated on the merits.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-2 and 6-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turpin 5167684, Berkey 5152818 and Yamauchi 4834786.

Looking at preform of figures 1a-b of Turpin, holes 13 and14 are formed in the preform: see col. 2, line 52-55. It is deemed that 13 and 14 are "holes" because they are openings/gaps. This is deem to be the broadest reasonable interpretation of "hole"; applicant has not specifically and clearly given another meaning to "hole". Turpin does not disclose the second step. The third step (including the pressure control) is disclosed at col. 4 lines 6-30, figure 4 as well as other places.

It is well known that OH in a glass fiber can cause the light in the fiber to be absorbed – for example see Yamauchi, col. 4, lines 34-45. It would have been obvious to dehydrate the Turpin preform, so as to remove any OH impurity. Berkey is cited as teaching a way to dehydrate preforms of the same structure of Turpin, namely heating the preform. See col. 7, lines 21-24 of Berkey. Additionally, examiner gives Official notice that heating is an known easy way to dry almost anything.

It would have been obvious to use heat to dry the Turpin preform, so as to make sure no OH contaminates the final fiber.

Claim 2: Berkey also teaches blowing gas through the holes to dry them. Blowing on things is another well known way to assist the drying of nearly anything. It would have been obvious to flow gas through the Turpin preform while heating it, so as to remove any of the OH ions. As to doing it in a drawing tower. It would have been obvious to the drying in the same place as the drawing (i.e. in the drawing tower) so as to save the time/cost of transferring the preform – and to reduce the risk of dropping the preform and breaking it.

Claim 6, it would have been obvious to heat the preform as high as reasonably possible to remove as much OH as possible.

Claim 7, it would have been obvious to use as dry a gas as possible – so as to remove as much OH as possible. Any OH in the air could diffuse back into the glass.

Claims 8-9 Berkey teaches using nitrogen. This is interpreted to mean pure or nearly pure nitrogen – i.e. at least 99%.

Claims 10-11: Examiner gives Official notice that Chlorine is a well known gas that is used to aid in the drying of glass. It would have been obvious to use chlorine to aid the drying.

Claims 12-13: Berkey teaches the use of etchants as claimed: See from col. 5, line 63- col.6, line 16. Berkey gives various reasons for using the etchant. IT would have been obvious to etch the Turin bores in the manner that Berkey teaches – for any or all of the reasons that Berkey teaches.

Claim 14 is met for the reasons given above, except for the adjusting. It would have been obvious to expect that the controlling process would entail a change in pressure that would have to be adjusted to the nominal pressure. Clearly, if the pressure was expected to stay constant, there would not be much need for a control system or a sensors.

Claims 1, 3, 5, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey 4157906.

Claim 3: The first step is disclosed at col. 5, lines 43-45: the removal forms the "one or more holes" in the preform as can be seen in figure 3. The second step: see col. 6, lines 25-30 and col. 7, lines 8-12 as well as figure 3. Figure 3 also shows the drawing of the preform of figure 3.

However, Bailey does not disclose the pressure control. Although, col. 6, lines 38-45 discloses using an optimal flow rate. It would have been obvious to control the pressure so that it is always above the ambient pressure, because such is necessary to

have a flow rate. A difference in pressure is necessary for gas to flow. It is deemed that 54 would be a "pressure-controlling device".

As to "holes having closed ends": this is interpreted to be "one or more holes having closed ends". The other way to interpret this is that there has to be more than one hole. Neither of these interpretations is perfect because that would mean "one or more holes" cannot be "one" hole. But since there is explicit recitation of "one" hole, it is deemed reasonable to assume that the claim is open to exactly one hole. So, given the choice between these two reasonable interpretations, the Office goes with the broadest reasonable interpretation. As can be seen from figure 3, the hole has a closed end.

Claims 1 and 5 are clearly met.

Claim 15: see col. 5, line 16.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Carpenter, Blankenship, Keck, and Berkey are cited as being similar to applicant's invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John Hoffmann
Primary Examiner
Art Unit 1731

12-13-04

jmh